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PN - KR2002078637 A 20021019
 TI - PREPARATION OF ULTRAFINE TIO₂ POWDER FROM TICL₄ SOLUTION USING INORGANIC ACID
 PA - AHAE CORP (KR); PAK CHONG SIK (KR); YANG YEONG SEOK (KR)
 IN - PAK CHONG SIK (KR); YANG YEONG SEOK (KR)
 AP - KR20010018426 20010406
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 DT - I

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AN - 2003-490093 [46]
 TI - Preparation of ultrafine titanium dioxide powder from titanium tetrachloride solution using inorganic acid
 AB - KR2002078637 NOVELTY - Provided is a preparation method of crystalline titanium dioxide powder with nano size and uniform particle distribution by using titanium tetrachloride as a starting material.
 - DETAILED DESCRIPTION - The preparation method of nano-sized (at most 1 micrometer) rutile TiO₂ powder is as follows:
 - (i) keeping the temperature of TiCl₄ constant in a reactor (-10 to 10 deg. C);
 - (ii) adding 0.01-5 N of aqueous inorganic acid (-10 to 10 deg. C) such as HCl, HNO₃, H₂SO₄, H₃PO₄ for Ti⁴⁺ solution (at least 1.4M) containing TiOCl₂ and HCl;
 - (iii) adding distilled water at room temperature to be 0.1-0.4M of Ti⁴⁺ and mixing;
 - (iv) aging at 15-200 deg. C for 2-24 hours to get precipitates (TiO₂);
 - (v) filtering, diluting TiO₂ slurry with distilled water, and adding alkali solution, nonmetallic hydroxides, such as NaOH, KOH and NH₄OH to adjust the pH of the diluted TiO₂ to be 6-8; and
 - (vi) filtering, washing 1-3 times to remove NaCl, and drying.
 - (Dwg.1/10)
 IW - PREPARATION ULTRAFINE TITANIUM POWDER TITANIUM SOLUTION INORGANIC ACID
 PN - KR420275 B 20040302 DW200443 C01G23/047 000pp
 - KR2002078637 A 20021019 DW200346 C01G23/047 001pp
 IC - C01G23/047
 MC - E35-K01 G01-A08
 DC - E32 G01
 PA - (AHAE-N) AHAE CORP
 - (PAKC-I) PAK C S
 - (YANG-I) YANG Y S
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